Section 18.51.113

Section R301.1.1 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R301.1.1 Alternative provisions. As an alternative to the requirements in Section R301.1 the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards the design shall comply with the *International Building Code*.

1. American Forest and Paper Association (AAF&PA) *Wood Frame Construction Manual* (WFCM).
2. American Iron and Steel Institute (AISI) *Standard for Cold-Formed Steel Framing - Prescriptive Method for One- and Two-Family Dwellings* (COFS/PM) *with Supplement to Standard for Cold-Formed Steel Framing - Prescriptive Method for One- and Two-Family Dwellings.*
3. *The Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30, 2011).*

Section 18.51.115

TableR301.2(1) of the *International Residential Code* of the City of Wichita is amended to read as follows:

Table R301.2(1) Climatic and Geographic Design Criteria. The Climatic and Geographic Design Criteria for building design shall be as provided in Table R301.2(1).

Table Inset:

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED[d] (mph)	SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRIER UNDERLAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
			Weathering[a]	Frost line depth[b]	Termite[c]					
15	90	A	Severe	24 "	Mod./ Severe	-7° F.	No	Title 27.06	700	55/ 60

For SI: 1 pound per square foot = 0.0479kPa, 1 mile per hour = 0.447 m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate" or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade. For construction of one and two family dwelling habitable spaces, the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings* (August 30, 2011) shall apply.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been any history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

e. The outdoor design dry-bulb temperature shall be selected from the columns of 97 ½ - percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be submitted to reflect local climates or local weather experience as determined by the building official.

f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the currently effective FIRM and FBFM, or other flood hazard map adopted by the community, as may be amended.

h. In accordance with Sections R905.2.7.a, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES". Otherwise, the jurisdiction shall fill in this part of the table with "NO".

i. The jurisdiction shall fill in this part of the table with the 100-year return period freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index – USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index – USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

Section 18.51.382

Section R401.4 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R401.4 Soil Tests. In areas likely to have expansive, compressible, shifting or other unknown soil characteristics, the building official shall determine whether to require a soil test and/or analysis to determine the soil's characteristics at a particular location. This test shall be made by an approved testing agency using an approved method. For construction of one and two family dwelling habitable spaces, a soil test/analysis shall be submitted prior to issuance of a building permit in accordance with the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30, 2011)*. Soil analysis and/or testing shall be verified and/or certified by the building permit applicant and the approved testing agency in a form approved by the building official.

Section 18.51.383

Section R403.1.1 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R403.1.1. Minimum size. Minimum sizes for concrete and masonry footings shall be as set forth in Table R403.1 and Figure R403.1(l). For construction of one and two family dwelling habitable spaces, the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30,2011)* shall apply.

The footing width, W, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. Spread footings shall be a least 6 inches (152 mm) thick. Footing projections, P, shall be at least 2 inches (51 mm) and shall not exceed the thickness of the footing. The size of footings supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1. Footings for wood foundations shall be in accordance with the details set forth in Section R403.2, and Figures R403.1(2) and R403.1(3).

Section 18.51.384

Section R403.1.3.2 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R403.1.3.2 Slabs-on-grade with turned-down footings and slabs-on-grade cast monolithically with a footing. For slabs-on-grade with turned-down footings and slabs-on-grade cast monolithically with a footing, construction of one and two family dwelling habitable spaces shall comply with the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30, 2011)*.

Section 18.51.390

Section 403.1.4 of the *International Residential Code* of the City of Wichita is hereby amended to read as follows:

R403.1.4 Minimum depth. All exterior footings shall be placed at least 24 (610 mm) inches below the undisturbed ground surface. For construction of one and two family dwelling habitable

spaces, the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30, 2011)* shall apply. Where applicable, the depth of the footings shall also conform to Section 403.1.4.1 through R 403.1.4.2.

Section 18.51.400

Section R403.1.4.1 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R403.1.4.1 Frost protection. Section 403.1.4.1 of the International Residential Code is amended to read as follows:

Frost Protection. Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.(1), per amended Table footnote "b." and the *Wichita Foundation, Basement and Slab-an-Grade Standards for One and Two Family Dwellings (August 30, 2011)*;
2. Constructing in accordance with Section R403.3;
3. Constructing in accordance with ASCE 32; or
4. Erected on solid rock

Exceptions:

1. Protection of freestanding accessory structures with an area of 400 (36.2m2) square feet or less of light-framed construction with an eave-height of 10 feet (3048mm) or less shall not be required.
2. Protection of freestanding accessory structures with an area 400 square feet (36.2m2) or less of other than light-framed construction with an eave-height of 10 feet (3048mm) or less shall not be required.

Footings shall not bear on frozen soil. Frost depth in Wichita is 24 inches.

Section 18.51.401

Section R403.1.8 of the International Residential Code of the City of Wichita is amended to read as follows:

R403.1.8 Foundations on expansive soils. Foundations and floor slabs for buildings located on expansive soils shall be designed in accordance with Section 1805.8 of the *International Building Code* or as specified in the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30,2011)*.

Section 18.51.402

Section R404.1 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R404.1 Concrete and masonry foundation walls. Concrete and masonry foundation walls shall be selected and constructed in accordance with the provisions of Section R404 or in accordance with ACI 318, ACI 332, and NCMATR68-A or ACI 530/ASCE 5/TMS 402 or other approved structural standards. The *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings (August 30, 2011)* may be used to comply with the requirements of this section, but do not preclude the right of the Office of Central Inspection to require a footing/foundation to be designed by a Kansas licensed architect or engineer.

Pre-engineered foundation wall systems such as insulated concrete forms (ICF walls) shall be installed to comply with the manufacturer's specifications or with architect or engineer requirements. All specifications or design documents shall be on site for each required inspection.

When ACI 318, ACI 332 or ACI 530/ASCE 5/TMS 402 or the provisions of Section R404 are used to design concrete or masonry foundation walls, project drawings, typical details and specifications are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the jurisdiction having authority.

Foundation walls that meet all of the following shall be considered laterally supported:

1. Full basement floor shall be a minimum 3.5 inches (89 mm) thick concrete slab poured tight against the bottom of the foundation wall.
2. Floor joists and blocking shall be connected to the sill plate at the top of wall by the prescriptive method called out in Table R404.1(1), or; shall be connected with an approved connector with listed capacity meeting Table R404.1(1).
3. Bolt spacing for the sill plate shall be no greater than per Table R404.1(2).
4. Floor shall be blocked perpendicular to the floor joists. Blocking shall be full depth within two joist spaces of the foundation wall, and be flat-blocked with minimum 2-inch by 4-inch (51mm by 102mm) blocking elsewhere.
5. Where foundation walls support unbalanced load on opposite sides of the building, such as a daylight basement, the building aspect ratio, L/W, shall not exceed the value specified in Table R404.1(3). For such foundation walls, the rim board shall be attached to the sill with a 20 gage metal angle clip at 24 inches (610 mm) on center, with five 8d nails per leg, or an approved connector supplying 230 pounds per linear foot (3.36 kN/m) capacity.

Section 18.51.420

Section R506.1 of the *International Residential Code* of the City of Wichita is amended to read as follows:

R506.1 General. Concrete slab-on-grade floors shall be a minimum 3.5 inches (89 mm) thick and designed and installed in accordance with the *Wichita Foundation, Basement and Slab-an-Grade Standards for One and Two Family Dwellings (August 30,2011)*.